

Amendments to the Claims:

Following is a complete listing of the claims pending in the application, as amended:

1-61. (Canceled.)

62. (Previously Presented) A method in a portable computer for providing information about a context that is modeled with multiple context attributes, comprising:

receiving from a first client an indication of an interest in receiving notification when a specified event that is related to at least one of the context attributes occurs, the specified event based at least in part on values of one or more of the at least one context attributes;

monitoring information related to the at least one context attributes for an indication of an occurrence of the specified event, the monitoring including obtaining multiple values for one of the at least one context attributes and mediating the obtained multiple values to determine a mediated value for that one context attribute; and

when the monitoring detects an indication of the occurrence of the specified event based at least in part on the mediated value, notifying the first client of the occurrence.

63. (Original) The method of claim 62 wherein the context attributes represent information about a user of the portable computer.

64. (Original) The method of claim 62 wherein the context that is represented is a current context.

65. (Original) The method of claim 62 including:

receiving from the first client an indication of a condition related to a value of one of the context attributes such that the first client desires to know when the condition has been satisfied;

monitoring changes in the value of the one context attribute to determine whether the condition is satisfied; and

when it is determined that the condition is satisfied, notifying the first client that the condition is satisfied.

66. (Original) The method of claim 62 wherein the specified event is availability of a source for supplying values of a specified context attribute.

67. (Original) The method of claim 62 wherein the specified event is availability of a specified source for supplying values of at least one context attribute.

68. (Original) The method of claim 62 wherein the received indication from the first client additionally specifies circumstances related to the event such that the notifying is to be performed only if the circumstances are satisfied by the occurrence of the event.

69. (Original) The method of claim 62 wherein receiving of the notification by the first client prompts the first client to present information to a user of the first client.

70. (Previously Presented) A computer-readable medium containing instructions that when executed cause a computing device to provide information about a context that is modeled with multiple context attributes, by performing a method comprising:

receiving from a first client an indication of an interest in receiving notification when a specified event that is related to at least one of the context attributes occurs;

monitoring information related to the at least one context attributes for an indication of an occurrence of the specified event, the monitoring including obtaining multiple values for one of the at least one context attributes and mediating the obtained multiple values to determine a mediated value for that one context attribute; and

when the monitoring detects an indication of the occurrence of the specified event based at least in part on the mediated value, notifying the first client of the occurrence.

71. (Currently Amended) A portable computer for providing information about a context that is represented with multiple attributes, comprising:

a memory;

a notification input module that when executed in the memory is capable of receiving from a first client an indication of an interest in receiving notification when a specified event that is related to at least one of the context attributes occurs, the specified event based at least in part on values of one or more of the at least one context attributes; and

a notifier module that when executed in the memory is capable of monitoring information related to the at least one context attributes for an indication of an occurrence of the specified event, and of notifying the first client of the occurrence after the monitoring detects an indication of the occurrence of the specified event, the monitoring including obtaining multiple values for one of the at least one context attributes and mediating the obtained multiple values to determine a mediated value for that one context attribute.

72-81. (Canceled.)

82. (Original) A method in a wearable computer for providing information about a current state of a user of the wearable computer, the current state modeled with multiple state attributes, the wearable computer executing a plurality of state server modules to supply values for the state attributes, executing a plurality of state client modules to receive and process values for the state attributes, and executing an intermediary module to facilitate exchange of state attribute values, the method comprising:

under control of each of the executing state server modules, sending to the intermediary module values for at least one of the state attributes;

under control of multiple of the executing state client modules, sending to the intermediary module a notification request for a specified type of event such that the state client module that sent the notification request requests to be notified when the specified type of event occurs; and

under control of the intermediary module,

receiving the sent state attribute values and the sent notification requests;
sending at least some of the received state attribute values to at least some of the state client modules; and
for each of the received notification requests,
in response to the receiving of the notification request, monitoring occurrences of events in order to detect an occurrence of the type of event specified for that notification request; and
when an occurrence of the type of event specified for that notification request is detected, notifying the state client module that sent the notification request of the occurrence,
so that the state client modules can automatically be notified of occurrences of events of interest.

83. (Original) The method of claim 82 wherein the specified type of event is related to availability of a value for a specified state attribute.

84. (Original) The method of claim 82 wherein the specified type of event is related to availability of a specified state server module.

85. (Original) The method of claim 82 including, under the control of the intermediary module:

receiving from a first of the state server modules a notification request for a specified type of event such that the first state server module will be notified when the specified type of event occurs;

in response to the receiving of the notification request from the first state server module, monitoring occurrences of events in order to detect an occurrence of the type of event specified for that notification request; and

when an occurrence is detected of the type of event specified for the notification request from the first state server module, notifying the first state server module of the occurrence.

86. (Original) The method of claim 82 wherein at least some of the notification requests include a criteria related to the type of event specified for that notification request, and wherein the notifying of a state client module of the occurrence of the type of event specified in the notification request sent by that state client module is performed only when the criteria is satisfied by that occurrence.

87. (Original) The method of claim 82 wherein at least some of the notification requests include an indication of a number of times that the state client module that sent that notification request is to be notified of occurrences of the type of event specified for that notification request.

88. (Original) The method of claim 82 wherein at least some of the notification requests include an indication of an end date after which the state client module that sent that notification request is not to be notified of occurrences of the type of event specified for that notification request.

89. (Original) The method of claim 82 wherein the monitoring of occurrences of events includes analyzing received state attribute values and received messages.

90. (Original) The method of claim 82 including, under the control of the intermediary module:

receiving from a first of the state client modules an indication of a condition related to values of one or more specified state attributes, the indicated condition such that the first state client module desires to know when the condition has been satisfied;

determining whether any received values for the specified state attributes satisfy the condition; and

when it is determined that the condition is satisfied, notifying the first state client module.

91. (Original) The method of claim 82 including:

monitoring activities of a module;
detecting an occurrence of an event; and
automatically without further intervention by the module,
determining based on the monitoring that the detected occurrence would be of
interest to the module; and
notifying the module of the detected occurrence.

92. (Original) The method of claim 82 including, under the control of a first of the
state client modules:

receiving a sent current value from the intermediary module; and
presenting information to a user of the first state client module based on the receiving of
the value.

93-136. (Canceled.)

137. (Previously Presented) A method in a computer for providing information about a
current state that is modeled with multiple state attributes, the method comprising:

receiving from a module an indication of a condition related to values of one or more
specified state attributes, the indicated condition such that the module desires to be notified when
the condition has been satisfied;

receiving one or more values of the specified state attributes from one or more modules;
generating one or more modeled values for one or more state attributes at a higher level of
abstraction than the specified state attributes, the generated modeled values based at least in part
on the received values of the specified state attributes;

after the receiving of the indication of the condition, detecting satisfaction of the
indicated condition based at least in part on the generated modeled values of the state attributes at
the higher level of abstraction; and

notifying the module of the detected satisfaction.

138. (Original) The method of claim 137 wherein the detecting of the satisfaction includes monitoring changes in the modeling of the current state.

139. (Currently Amended) The method of claim 137 wherein the detecting of the satisfaction includes analyzing changes in the values of the ~~at least one~~ specified state attributes in order to determine when the condition is satisfied.

140. (Original) The method of claim 137 wherein the condition relates to a specified one of the state attributes having a specified value.

141. (Original) The method of claim 137 wherein the module is a source of values for at least one of the state attributes.

142. (Original) The method of claim 137 wherein the module is a consumer of values for at least one of the state attributes.

143. (Original) The method of claim 137 wherein the indication of the condition includes an indication of a number of times that the notifying of the module is to occur.

144. (Original) The method of claim 137 wherein the indication of the condition includes an indication of times during which the notifying of the module is to occur.

145. (Original) The method of claim 137 wherein the state attributes represent information about a user of the computer.

146. (Currently Amended) The method of claim ~~141-145~~ 145 wherein the represented information reflects a modeled mental state of the user.

147. (Original) The method of claim 137 wherein the notifying of the module of the detected satisfaction prompts the module to present information to a user of the module.

148. (Previously Presented) The method of claim 137 wherein the state attributes at the higher level of abstraction model a physical activity of a user of the computer.

149. (Previously Presented) The method of claim 137 wherein the state attributes at the higher level of abstraction model an emotional state of a user of the computer.

150. (Previously Presented) The method of claim 137 wherein the state attributes at the higher level of abstraction model a cognitive load of a user of the computer.

151-156. (Canceled.)

157. (Previously Presented) The method of claim 82 wherein the monitoring includes detecting changes in the modeled current state.

158. (Previously Presented) The method of claim 82 wherein each of the specified types of event is satisfaction of a condition related to a value of at least one of the state attributes, and wherein the detecting of the occurrence of a type of event includes analyzing changes in the values of the at least one state attributes for that type of event in order to determine when the condition for that type of event is satisfied.

159. (Previously Presented) The method of claim 158 wherein each of the conditions relates to a specified one of the state attributes having a specified value.

160. (Previously Presented) The method of claim 82 wherein each of the notification requests includes specified criteria that define a specified type of event, and wherein the detecting

of the occurrence of a type of event includes determining that the specified criteria for that type of event are satisfied.

161. (Previously Presented) The method of claim 160 wherein the specified criteria for each of the notification requests are not satisfied by the modeled current state at a time of the receiving of the notification requests.

162. (Previously Presented) The method of claim 160 wherein the specified criteria for each of the notification requests includes a change in a value of a specified state attribute.

163. (Previously Presented) The method of claim 82 wherein each of at least some of the specified types of events includes a source becoming available to supply values for a specified state attribute.

164. (Previously Presented) The method of claim 163 wherein the detecting of the occurrence of a type of event includes identifying receipt of a value for the specified state attribute for that type of event.

165. (Previously Presented) The method of claim 163 wherein the detecting of the occurrence of a type of event includes identifying receipt from a source of an indication of an ability to supply values for the specified state attribute for that type of event.

166. (Previously Presented) The method of claim 82 wherein each of at least some of the specified types of events includes availability of a value of a specified state attribute that satisfies a specified criteria.

167. (Previously Presented) The method of claim 166 wherein each of the sources available to supply values for the specified state attribute for a type of event at a time of the

receiving of the notification request for that type of event are unable to supply a value for the specified state attribute that satisfies the specified criteria.

168. (Previously Presented) The method of claim 166 wherein the detecting of the occurrence of a type of event includes repeatedly requesting at least one of the sources to supply a value for the specified state attribute for that type of event.

169. (Previously Presented) The method of claim 82 wherein each of at least some of the specified types of events includes a specified source becoming available to supply state attribute values, and wherein the detecting of the occurrence of a type of event includes determining that the specified source for that type of event is currently able to supply state attribute values.

170. (Previously Presented) The method of claim 169 wherein the specified source for each of the types of events is not available to supply state attribute values at a time of the receiving of the notification request for that type of event.

171. (Previously Presented) The method of claim 82 wherein each of at least some of the specified types of events includes a specified client becoming available to receive state attribute values.

172. (Previously Presented) The method of claim 171 wherein the detecting of the occurrence of a type of event is based on receiving a request from the specified client for that type of event for a value of a state attribute.

173. (Previously Presented) The method of claim 82 wherein each of at least some of the specified types of events includes at least one client expressing an interest in receiving values of a specified state attribute.

174. (Previously Presented) The method of claim 82 wherein the computer has access to various devices, and wherein each of at least some of the specified types of events includes a value of one of the state attributes indicating that access to a specified device has become available.

175. (Previously Presented) The method of claim 82 wherein each of at least some of the specified types of events includes access to a group of themed attributes becoming available.

176. (Previously Presented) The method of claim 82 wherein each of at least some of the specified types of events includes a value of one of the state attributes indicating that access to other functionality provided by the intermediary module has become available.

177. (Previously Presented) The method of claim 176 wherein the other functionality is a specified mediator.

178. (Previously Presented) The method of claim 177 wherein the detecting of the occurrence of a type of event is based on identifying software being loaded that when executed will provide mediating for the specified mediator.

179. (Previously Presented) The method of claim 82 wherein each of at least some of the notification requests includes an indication of a number of times that the notifying of the state client module is to occur based on that notification request.

180. (Previously Presented) The method of claim 82 wherein each of at least some of the notification requests includes an indication of times during which the notifying of the state client module is to occur based on that notification request.

181. (Previously Presented) The method of claim 82 wherein the state attributes represent a modeled mental state of the user.

182. (Previously Presented) The method of claim 82 wherein the state attributes represent information about the computer.

183. (Previously Presented) The method of claim 82 wherein the state attributes represent information about a physical environment.

184. (Previously Presented) The method of claim 82 wherein the state attributes represent information about a cyber-environment of the user.

185. (Previously Presented) The method of claim 82 wherein the state attributes represent current predictions about a future state.

186. (Previously Presented) The method of claim 82 wherein the notifying of a state client module of a detected occurrence prompts the module to present information to a user of the module.

187. (Previously Presented) The method of claim 82 wherein the notifying of a state client module of a detected occurrence includes supplying information about the detected occurrence.

188. (Previously Presented) The method of claim 82 wherein the wearable computer is a portable computer.

189. (Previously Presented) The method of claim 82 wherein the wearable computer is a body-supported computer.

190. (Previously Presented) The method of claim 82 wherein the wearable computer is a thin client.

191. (Previously Presented) The method of claim 82 wherein the user is another computing device.

192. (Previously Presented) The method of claim 82 wherein the user is interacting with one or more of the state client modules.

193. (Previously Presented) The method of claim 82 wherein the user is not a person.

194. (Previously Presented) The method of claim 82 wherein one or more of the state client modules, one or more of the state server modules and/or the intermediary module are executed by the wearable computer on one or more remote computing devices.

195. (Previously Presented) The method of claim 82 wherein a portion of one or more of the state client modules, of one or more of the state server modules and/or of the intermediary module is executed by the wearable computer on one or more remote computing devices.

196. (Previously Presented) The method of claim 82 wherein the sending by the state server modules of the state attribute values is performed in response to one or more requests by the intermediary module for those values.

197. (Previously Presented) The method of claim 82 wherein the sending by the state server modules of the state attribute values is performed without requests by the intermediary module for those values.

198. (Previously Presented) A computer-readable medium whose contents cause a computing device to provide information about a current state modeled with multiple state attributes, the providing of the information based on a plurality of executing state server modules that supply values for the state attributes, on a plurality of executing state client modules that

receive and process values for the state attributes, and on an executing intermediary module that facilitates exchange of state attribute values, by performing a method comprising:

- for each of the executing state server modules, sending values for at least one of the state attributes;

- for each of multiple of the executing state client modules, sending a notification request for a specified type of event such that the state client module requests to be notified when the specified type of event occurs; and

- under control of the intermediary module,

- receiving the sent state attribute values and the sent notification requests;

- sending at least some of the received state attribute values to at least some of the state client modules; and

- for each of the received notification requests,

- monitoring occurrences of events in order to detect an occurrence of the type of event specified for that notification request; and

- when an occurrence of the type of event specified for that notification request is detected, notifying the state client module for which the notification request was sent of the occurrence.

199. (Currently Amended) A portable computing device for providing information about a state of a user, the state modeled with multiple state attributes, the providing of the information based on a plurality of executing state server modules to supply values for the state attributes, on a plurality of executing state client modules to receive and process values for the state attributes, and on an executing intermediary module to facilitate exchange of state attribute values, comprising:

- a memory;

- a first module configured to, when executed in memory, for each of the executing state server modules, receive values sent from the state server module for at least one of the state attributes, and configured to send at least some of the received state attribute values to at least some of the state client modules;

a second module configured to, when executed in memory, for each of multiple of the executing state client modules, receive a notification request from the state client module for a specified type of event such that the state client module requests to be notified when the specified type of event occurs; and

an intermediary module configured to, when executed in memory, for each of the notification requests,

monitor occurrences of events in order to detect an occurrence of the type of event specified for that notification request; and

when an occurrence of the type of event specified for that notification request is detected, notify the state client module for the notification request of the occurrence.

200. (Previously Presented) A method in a computing device for providing information about a state that is modeled with multiple state attributes, comprising:

receiving from a first client an indication of an interest in receiving notification when a specified event that is related to one or more values of at least one of the state attributes occurs;

retrieving indications of cached values for one or more of the at least one state attributes;

when it is determined from the retrieved indications that the cached values do not reflect an occurrence of the specified event, obtaining additional values for one or more of the at least one state attributes from one or more servers; and

when it is determined that the obtained additional values do reflect an occurrence of the specified event, notifying the first client of the occurrence.

201. (Previously Presented) The method of claim 200 wherein the determining from the retrieved indications that the cached values do not reflect an occurrence of the specified event is based at least in part on the cached values being too old.

202. (Previously Presented) The method of claim 200 wherein the determining from the retrieved indications that the cached values do not reflect an occurrence of the specified event is based at least in part on the cached values lacking sufficient accuracy.

203. (Previously Presented) A method in a computing device for providing information about a state that is modeled with multiple state attributes, comprising:

receiving from a first client an indication of an interest in receiving notification when a first specified event that is related to at least one of the state attributes occurs;

after the receiving of the indication of the interest in receiving notification when the first specified event occurs, receiving one or more indications from one or more servers that reflect an ability of each of those servers to supply values for one or more additional state attributes whose values were not previously available;

after the receiving of an indication from one of the servers that reflects the ability of that one server to supply values for one of the additional state attributes, receiving from a second client an indication of an interest in receiving notification when a second specified event occurs that is related at least in part to that one additional state attribute; and

when an occurrence of the second specified event is detected based at least in part on a value of the one additional state attribute, notifying the second client of the occurrence.

204. (Previously Presented) The method of claim 203 wherein the first specified event is related to one of the additional state attributes, and after the receiving of an indication from one of the servers that reflects the ability of that one server to supply values for that one additional state attribute, detecting an occurrence of the first specified event based at least in part on a value of that one additional state attribute and notifying the first client of the occurrence.

205. (Previously Presented) The method of claim 203 wherein the first and second clients are distinct.

206-207. (Canceled.)

208. (New) The computer-readable medium of claim 70 wherein the multiple context attributes represent information about a user of the computing device.

209. (New) The computer-readable medium of claim 208 wherein the multiple context attributes represent information about a physical activity of the user, a modeled mental state of the user, a physical environment of the user, and a cyber-environment of the user.

210. (New) The computer-readable medium of claim 70 wherein the context that is represented is a current context.

211. (New) The computer-readable medium of claim 70 wherein the method further comprises:

receiving from the first client an indication of a condition related to a value of one of the context attributes such that the first client desires to know when the condition has been satisfied;

monitoring changes in the value of the one context attribute to determine whether the condition is satisfied; and

if it is determined that the condition is satisfied, notifying the first client that the condition is satisfied.

212. (New) The computer-readable medium of claim 70 wherein the specified event is based at least in part on availability of a source for supplying values of one or more of the at least one context attributes and/or on availability of a specified source for supplying values of at least one context attribute.

213. (New) The computer-readable medium of claim 70 wherein the received indication from the first client additionally specifies circumstances related to the event such that the notifying is to be performed only if the circumstances are satisfied by the occurrence of the event.

214. (New) The computer-readable medium of claim 70 wherein the computer-readable medium is a memory of the computing device.

215. (New) The computer-readable medium of claim 70 wherein the computer-readable medium is a data transmission medium transmitting a generated data signal containing the instructions.

216. (New) The portable computer of claim 71 wherein the notifier module is further capable of:

monitoring changes in the value of an indicated context attribute to determine whether a condition indicated by the first client is satisfied, the condition being related to a value of the indicated context attribute; and

if it is determined that the condition is satisfied, notifying the first client that the condition is satisfied.

217. (New) The portable computer of claim 71 wherein the specified event is based at least in part on availability of a source for supplying values of one or more of the at least one context attributes and/or on availability of a specified source for supplying values of at least one context attribute.

218. (New) The portable computer of claim 71 wherein the received indication from the first client additionally specifies circumstances related to the event such that the notifying is to be performed only if the circumstances are satisfied by the occurrence of the event.

219. (New) The portable computer of claim 71 wherein the notification input module consists of a means for receiving from a first client an indication of an interest in receiving notification when a specified event occurs that is related to at least one of the context attributes so as to be based at least in part on values of one or more of the at least one context attributes, and wherein the notifier module consists of a means for monitoring information related to the at least one context attributes for an indication of an occurrence of the specified event and for notifying the first client of the occurrence after the monitoring detects an indication of the occurrence of the specified event, the monitoring including obtaining multiple values for one of

the at least one context attributes and mediating the obtained multiple values to determine a mediated value for that one context attribute.

220. (New) The method of claim 137 wherein the receiving of the one or more values of the specified state attributes from the one or more modules includes receiving additional information for each of the one or more values that describes that value, and wherein at least one of the detecting of the satisfaction of the indicated condition and the notifying of the module of the detected satisfaction is further based at least in part on the additional information for at least one of the one or more values of the specified state attributes.

221. (New) The method of claim 220 wherein the generating of the one or more modeled values for the one or more state attributes at the higher level of abstraction is further based at least in part on the additional information for at least one of the one or more values of the specified state attributes.

222. (New) The method of claim 220 wherein the additional information for each of the one or more values is metadata for the value.

223. (New) The method of claim 220 wherein the additional information for each of the one or more values includes uncertainty information for the value.

224. (New) The method of claim 220 wherein the additional information for each of the one or more values includes information related to one or more times at which the value is accurate.

225. (New) The method of claim 220 wherein the detecting of the satisfaction of the indicated condition is based at least in part on the additional information for at least one of the one or more values of the specified state attributes.

226. (New) The method of claim 220 wherein the notifying of the module of the detected satisfaction is based at least in part on the additional information for at least one of the one or more values of the specified state attributes.

227. (New) The method of claim 137 further comprising, before the notifying of the module of the detected satisfaction, determining that the module has access to values of the specified state attributes.

228. (New) The method of claim 227 wherein the determining that the module has access to values of the specified state attributes is based at least in part on a user associated with the module.

229. (New) The method of claim 227 including, if the module is not determined to have access to the values of the specified state attributes, notifying the module that notifications of satisfaction of the indicated condition will not be provided.

230. (New) The method of claim 137 including, after the detecting of the satisfaction of the indicated condition, presenting information to a user regarding the satisfaction.

231. (New) The method of claim 137 wherein the received indication of the condition includes specified criteria that define the condition.

232. (New) The method of claim 231 wherein the specified criteria is not satisfied by the modeled current state at a time of the receiving of the indication of the condition.

233. (New) The method of claim 137 wherein the condition includes availability of a value of a specified state attribute that satisfies a specified criteria.

234. (New) The method of claim 233 wherein there are no sources available to supply values for the specified state attribute that satisfy the specified criteria at a time of the receiving of the indication of the condition.

235. (New) The method of claim 233 wherein the detecting includes repeatedly requesting at least one source to supply a value for the specified state attribute.

236. (New) The method of claim 137 wherein the computer has access to various devices, and wherein the condition includes that access to a specified device has become available.

237. (New) The method of claim 200 wherein the multiple state attributes represent information about a user of the computing device.

238. (New) The method of claim 237 wherein the multiple state attributes represent information about a physical activity of the user, a modeled mental state of the user, a physical environment of the user, and a cyber-environment of the user.

239. (New) The method of claim 200 wherein the state that is represented is a current state.

240. (New) The method of claim 200 wherein the specified event is based at least in part on availability of a source for supplying values of one or more of the at least one state attributes and/or on availability of a specified source for supplying values of at least one state attribute.

241. (New) The method of claim 200 wherein the received indication from the first client additionally specifies circumstances related to the event such that the notifying is to be performed only if the circumstances are satisfied by the occurrence of the event.

242. (New) The method of claim 203 wherein the multiple state attributes represent information about a user of the computing device.

243. (New) The method of claim 242 wherein the multiple state attributes represent information about multiple of a physical activity of the user, a modeled mental state of the user, a physical environment of the user, and a cyber-environment of the user.

244. (New) The method of claim 203 wherein the state that is represented is a current state.

245. (New) The method of claim 203 wherein each of the first and second events is based at least in part on availability of a source for supplying values of one or more state attributes.

246. (New) The method of claim 203 wherein the received indication from the second client additionally specifies circumstances related to the second event such that the notifying is to be performed only if the circumstances are satisfied by the occurrence of the second event.

247. (New) A computer-readable medium containing contents that cause a computing device to provide information about a current state that is modeled with multiple state attributes, by performing a method comprising:

- receiving from a module an indication of a condition related to values of one or more specified state attributes;

- receiving one or more values of the specified state attributes from one or more sources;

- generating one or more modeled values for one or more state attributes at a higher level of abstraction than the specified state attributes, the generated modeled values based at least in part on the received values of the specified state attributes;

after the receiving of the indication of the condition, detecting satisfaction of the indicated condition based at least in part on the generated modeled values of the state attributes at the higher level of abstraction; and

notifying an indicated recipient of the detected satisfaction.

248. (New) The computer-readable medium of claim 247 wherein the detecting of the satisfaction includes monitoring changes in the modeling of the current state.

249. (New) The computer-readable medium of claim 247 wherein the detecting of the satisfaction includes analyzing changes in the values of the specified state attributes in order to determine when the condition is satisfied.

250. (New) The computer-readable medium of claim 247 wherein the state attributes represent information about a user of the computing device.

251. (New) The computer-readable medium of claim 250 wherein the state attributes represent information about a physical activity of the user, a modeled mental state of the user, a physical environment of the user, and a cyber-environment of the user.

252. (New) The computer-readable medium of claim 247 wherein the state attributes at the higher level of abstraction model one or more of a physical activity of a user of the computing device, an emotional state of the user, and a cognitive load of the user.

253. (New) The computer-readable medium of claim 247 wherein the receiving of the one or more values of the specified state attributes from the one or more sources includes receiving additional information for each of the one or more values that describes that value, and wherein at least one of the detecting of the satisfaction of the indicated condition and the notifying of the indicated recipient of the detected satisfaction is further based at least in part on

the additional information for at least one of the one or more values of the specified state attributes.

254. (New) The computer-readable medium of claim 253 wherein the generating of the one or more modeled values for the one or more state attributes at the higher level of abstraction is further based at least in part on the additional information for at least one of the one or more values of the specified state attributes.

255. (New) The computer-readable medium of claim 253 wherein the additional information for each of the one or more values is metadata for the value.

256. (New) The computer-readable medium of claim 253 wherein the additional information for each of the one or more values includes uncertainty information for the value and/or information related to one or more times at which the value is accurate.

257. (New) The computer-readable medium of claim 247 further comprising, before the notifying of the module of the detected satisfaction, determining that the module has access to values of the specified state attributes.

258. (New) The computer-readable medium of claim 247 wherein the computer-readable medium is a memory of the computing device.

259. (New) The computer-readable medium of claim 247 wherein the computer-readable medium is a data transmission medium transmitting a generated data signal containing the contents.

260. (New) The computer-readable medium of claim 247 wherein the contents are instructions that when executed cause the computing device to perform the method.

261. (New) A computing device for providing information about a state that is modeled with multiple state attributes, comprising:

a memory;

a first module that when executed in the memory is capable of receiving from a client an indication of a condition related to values of one or more specified state attributes and of receiving one or more values of the specified state attributes;

a second module that when executed in the memory is capable of generating one or more modeled values for one or more state attributes at a higher level of abstraction than the specified state attributes based at least in part on the received values of the specified state attributes; and

a third module that when executed in the memory is capable of detecting satisfaction of the indicated condition based at least in part on the generated modeled values of the state attributes and notifying the client of the detected satisfaction.

262. (New) The computing device of claim 261 wherein the detecting of the satisfaction includes monitoring changes in the modeling of the state.

263. (New) The computing device of claim 261 wherein the detecting of the satisfaction includes analyzing changes in the values of the specified state attributes in order to determine when the condition is satisfied.

264. (New) The computing device of claim 261 wherein the state attributes represent information about multiple of a physical state of a user of the computing device, a physical environment of the user, and a cyber-environment of the user.

265. (New) The computing device of claim 264 wherein the state attributes at the higher level of abstraction model one or more of a physical activity of the user, an emotional state of the user, and a cognitive load of the user.

266. (New) The computing device of claim 261 wherein the receiving of the one or more values of the specified state attributes includes receiving additional information for each of the one or more values that describes that value, and wherein at least one of the detecting of the satisfaction of the indicated condition and the notifying of the client of the detected satisfaction is further based at least in part on the additional information for at least one of the one or more values of the specified state attributes.

267. (New) The computing device of claim 266 wherein the additional information for each of the one or more values is metadata for the value.

268. (New) The computing device of claim 266 wherein the additional information for each of the one or more values includes uncertainty information for the value and/or information related to one or more times at which the value is accurate.

269. (New) A computer-readable medium containing contents that cause a computing device to provide information about a state that is modeled with multiple state attributes, by performing a method comprising:

- receiving from a first client an indication of an interest in receiving notification when a specified event occurs that is related to one or more values of at least one of the state attributes;

- retrieving indications of cached values for one or more of the at least one state attributes;

- when it is determined that the cached values do not reflect an occurrence of the specified event, obtaining additional values for one or more of the at least one state attributes from one or more sources; and

- when it is determined that the obtained additional values do reflect an occurrence of the specified event, notifying the first client of the occurrence.

270. (New) The computer-readable medium of claim 269 wherein the determining that the cached values do not reflect an occurrence of the specified event is based at least in part on the cached values being too old.

271. (New) The computer-readable medium of claim 269 wherein the determining that the cached values do not reflect an occurrence of the specified event is based at least in part on the cached values lacking sufficient accuracy.

272. (New) The computer-readable medium of claim 269 wherein the multiple state attributes represent information about multiple of a physical activity of a user of the computing device, a modeled mental state of the user, a physical environment of the user, and a cyber-environment of the user.

273. (New) The computer-readable medium of claim 269 wherein the specified event is based at least in part on availability of a source for supplying values of one or more of the at least one state attributes and/or on availability of a specified source for supplying values of at least one state attribute.

274. (New) The computer-readable medium of claim 269 wherein the received indication from the first client additionally specifies circumstances related to the event such that the notifying is to be performed only if the circumstances are satisfied by the occurrence of the event.

275. (New) The computer-readable medium of claim 269 wherein the computer-readable medium is a memory of the computing device.

276. (New) The computer-readable medium of claim 269 wherein the computer-readable medium is a data transmission medium transmitting a generated data signal containing the contents.

277. (New) The computer-readable medium of claim 269 wherein the contents are instructions that when executed cause the computing device to perform the method.

278. (New) A computing device for providing information about a state that is modeled with multiple state attributes, comprising:

a memory;

a first module that when executed in the memory is capable of receiving from a client an indication of an interest in receiving notification when a specified event that is related to one or more values of at least one of the state attributes occurs; and

a second module that when executed in the memory is capable of retrieving indications of cached values for one or more of the at least one state attributes, of obtaining additional values for one or more of the at least one state attributes if it is determined that the cached values do not reflect an occurrence of the specified event, and of notifying the client of the occurrence if it is determined that the obtained additional values reflect an occurrence of the specified event.

279. (New) The computing device of claim 278 wherein the determining that the cached values do not reflect an occurrence of the specified event is based at least in part on the cached values being too old and/or on the cached values lacking sufficient accuracy.

280. (New) The computing device of claim 278 wherein the multiple state attributes represent information about multiple of a physical activity of a user of the computing device, a modeled mental state of the user, a physical environment of the user, and a cyber-environment of the user.

281. (New) The computing device of claim 278 wherein the received indication from the first client additionally specifies circumstances related to the event such that the notifying is to be performed only if the circumstances are satisfied by the occurrence of the event.

282. (New) A computer-readable medium containing contents that cause a computing device to provide information about a state that is modeled with multiple state attributes, by performing a method comprising:

receiving from a client an indication of an interest in receiving notification when a first specified event that is related to at least one of the state attributes occurs;

after the receiving of the indication of the interest in receiving notification when the first specified event occurs, receiving one or more indications from one or more sources that reflect an ability of each of those sources to supply values for one or more additional state attributes whose values were not previously available;

after the receiving of an indication from one of the sources that reflects the ability of that one source to supply values for one of the additional state attributes, receiving from a client an indication of an interest in receiving notification when a second specified event occurs that is related at least in part to that one additional state attribute; and

when an occurrence of the second specified event is detected based at least in part on a value of the one additional state attribute, notifying the client that indicated the interest for the second specified event of the occurrence.

283. (New) The computer-readable medium of claim 282 wherein the first specified event is related to one of the additional state attributes, and after the receiving of an indication from one of the sources that reflects the ability of that one source to supply values for that one additional state attribute, detecting an occurrence of the first specified event based at least in part on a value of that one additional state attribute and notifying the client that indicated the interest for the first specified event of the occurrence.

284. (New) The computer-readable medium of claim 282 wherein the multiple state attributes represent information about multiple of a physical activity of a user of the computing device, a modeled mental state of the user, a physical environment of the user, and a cyber-environment of the user.

285. (New) The computer-readable medium of claim 282 wherein the computer-readable medium is a memory of the computing device.

286. (New) The computer-readable medium of claim 282 wherein the computer-readable medium is a data transmission medium transmitting a generated data signal containing the contents.

287. (New) The computer-readable medium of claim 282 wherein the contents are instructions that when executed cause the computing device to perform the method.

288. (New) A computing device for providing information about a state that is modeled with multiple state attributes, comprising:

- a memory;

- a first module that when executed in the memory is capable of receiving from a first client an indication of an interest in receiving notification when a first specified event that is related to at least one of the state attributes occurs, and of, after receiving an indication from a source that reflects the ability of that source to supply values for an additional state attribute whose values were not previously available, receiving from a second client an indication of an interest in receiving notification when a second specified event occurs that is related at least in part to that additional state attribute; and

- a second module that when executed in the memory is capable of, after the receiving of the indications of the interest in receiving notifications when the first and second specified events occur, notifying the second client when an occurrence of the second specified event is detected based at least in part on a value of the additional state attribute.

289. (New) The computing device of claim 288 wherein at least one of the first and second modules is further capable of, after the receiving of the indication of the interest in receiving notification when the first specified event occurs and before the receiving of the indication of the interest in receiving notification when the second specified event occurs,

receiving one or more indications from one or more sources that reflect an ability of each of those sources to supply values for one or more additional state attributes whose values were not previously available.

290. (New) The computing device of claim 289 wherein the first specified event is related to one of the additional state attributes, and after the receiving of an indication from one of the sources that reflects the ability of that one source to supply values for that one additional state attribute, detecting an occurrence of the first specified event based at least in part on a value of that one additional state attribute and notifying the first client of the occurrence.

291. (New) The computing device of claim 288 wherein the first and second clients are distinct.

292. (New) The computing device of claim 288 wherein the multiple state attributes represent information about a physical activity of a user of the computing device, a modeled mental state of the user, a physical environment of the user, and a cyber-environment of the user.

293. (New) The computing device of claim 288 wherein the received indication from the second client additionally specifies circumstances related to the second event such that the notifying is to be performed only if the circumstances are satisfied by the occurrence of the second event.